

## **Abstract of the Disclosure**

A method dynamically allocates and renegotiates bandwidth to traffic having a variable data rate in a network. A current data rate and current allocated bandwidth is measured. A future data rate for the traffic is predicted. A cost function is then minimized based on the current data rate, the current allocated bandwidth, and the future data rate to determine a future bandwidth to be allocated for the traffic so that a cost of the renegotiation is minimized over time.